

CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1-38 (canceled).

Claim 39 (new): A method for routing data packets in a packet switching data network having network nodes, wherein in the data network:

data packets are transmitted from a transmitter to a receiver;

the data packets have destination addresses;

the data packets are routed by the network nodes according to the destination addresses;

more than one path and consequently at least one alternative path to a destination is available in at least one network node;

successive packets or groups of packets are transmitted via different or multiple paths from the transmitter to the receiver in accordance with a defined traffic distribution which is determined by respectively assigned traffic distribution weightings;

the method comprising:

assigning a first and a second transmission path to a destination address;

including the first and the second transmission paths in a routing table of at least one network node of the data network, wherein the first and the second transmission paths have assigned traffic distribution weightings indicating a portion of the traffic load allocated to each transmission path;

assigning a maximum traffic distribution weighting to the first transmission path;

assigning a minimum traffic distribution weighting to the second transmission path;

as long as the first transmission path and the second transmission path are both available, routing the data packets via the first transmission path;

and

using links carrying the minimum traffic distribution weighting for the transmission of data packets only when a desired adjacent router or next hop towards the destination can no longer be reached by any other path.

Claim 40 (new): The method according to claim 39, which comprises: in an event of a failure of the first transmission path, assigning the maximum traffic distribution weighting to the second transmission path.

Claim 41 (new): The method according to claim 39, which comprises: in an event of a failure of the first transmission path, calculating a third transmission path that is given the minimum traffic distribution weighting.

Claim 42 (new): The method according to claim 39, which comprises:
controlling a particular network node such that a transmission path on which
the particular network node receives a data packet is blocked for a return
transmission of the same data packet.

Claim 43 (new): A method for routing data packets in a packet switching
data network having network nodes, wherein in the data network:

- data packets are transmitted from a transmitter to a receiver;
- the data packets have destination addresses;
- the data packets are routed by the network nodes according to the
destination addresses;
- more than one path and consequently at least one alternative path to a
destination is available in at least one network node;
- successive packets or groups of packets are transmitted via different or
multiple paths from the transmitter to the receiver in accordance with a
defined traffic distribution which is determined by respectively assigned
traffic distribution weightings;

the method comprising:

- assigning a first transmission path, at least one second transmission
path, and a last transmission path to a destination address;
- including the first transmission path, the at least one second
transmission path, and the last transmission path in a routing table of at
least one network node of the data network, wherein the first transmission
path, the at least one second transmission path, and the last transmission

path have assigned traffic distribution weightings indicating a portion of a traffic load allocated to each transmission path;

assigning a maximum traffic distribution weighting to the first transmission path;

assigning a minimum traffic distribution weighting to the at least one second transmission path and to the last transmission path;

as long as the first transmission path is available, routing the data packets via the first transmission path; and

using a plurality of links carrying the minimum traffic distribution weighting for transmitting data packets only when a desired adjacent router or next hop towards the destination can no longer be reached by any other path.

Claim 44 (new): The method according to claim 43, which comprises: in an event of a failure of the first transmission path, giving at least one other transmission path a traffic distribution weighting that deviates from the minimum traffic distribution weighting.

Claim 45 (new): The method according to claim 43, which comprises: in an event of a failure of the first transmission path, calculating at least one additional transmission path that is given the minimum traffic distribution weighting.

Claim 46 (new): The method according to claim 43, which comprises:
controlling a particular network node such that a transmission path on which
the particular network node receives a data packet is blocked for a return
transmission of the same data packet.

Claim 47 (new): A method for routing data packets in a packet switching
data network having network nodes, wherein in the data network:

- data packets are transmitted from a transmitter to a receiver;

- the data packets have destination addresses;

- the data packets are routed by the network nodes according to the
destination addresses;

- more than one path and consequently at least one alternative path to a
destination is available in at least one network node;

- successive packets or groups of packets are transmitted via different or
multiple paths from the transmitter to the receiver in accordance with a
defined traffic distribution which is determined by respectively assigned
traffic distribution weightings;

the method comprising:

- assigning a first transmission path, at least one second transmission
path, and a last transmission path to a destination address;

- including the first transmission path, the at least one second
transmission path, and the last transmission path in a routing table of at
least one network node of the data network, wherein the first transmission
path, the at least one second transmission path, and the last transmission

path have assigned traffic distribution weightings indicating a portion of the traffic load allocated to each transmission path;

assigning a minimum traffic distribution weighting to the last transmission path;

distributing traffic on the network using assigned traffic distribution weightings; and

using the last transmission path for transmitting data packets only in an event of a failure of at least a part of both the first transmission path and the at least one second transmission path or when a desired adjacent router or next hop towards the destination can no longer be reached by any other path.

Claim 48 (new): The method according to claim 47, wherein in an event of failure of at least a part of the transmission paths with values that deviate from the minimum traffic distribution weighting, the at least one transmission path with a minimum traffic distribution weighting is given a traffic distribution weighting that deviates from said minimum weighting.

Claim 49 (new): The method according to claim 47, wherein in an event of failure of at least a part of the transmission paths with values that deviate from the minimum traffic distribution weighting, at least one further transmission path is calculated that is given the minimum traffic distribution weighting.

Claim 50 (new): The method according to claim 47, which comprises controlling a particular network node such that a transmission path on which

the particular network node receives a data packet is blocked for a return transmission of the same data packet.

Claim 51 (new): The method according to claim 47, which comprises applying a multipath routing method in the packet-switching data network.

Claim 52 (new): The method according to claim 47, which comprises using a network operated in conformance with an Internet Protocol as the packet-switching data network.

Claim 53 (new): The method according to claim 47, which comprises communicating at least a failure of the first transmission path of a network node to at least one further network node.

Claim 54 (new): The method according to claim 53, which comprises using a protocol to perform a transmission.

Claim 55 (new): The method according to claim 53, which comprises recalculating at least one transmission path of at least one destination address in at least one further network node.

Claim 56 (new): The method according to claim 57, which comprises: assigning at least one further traffic distribution weighting to the transmission

paths with a minimum traffic distribution weighting entered in a routing table;
and

using the further traffic distribution weighting if a transmission path is
interrupted.

Claim 57 (new): The method according to claim 56, which comprises
assigning a transmission path to a further traffic distribution weighting entered
in the routing table and using the traffic distribution weighting in an event of a
failure of an assigned transmission path.

Claim 58 (new): A network node for a packet switching data network
comprising:

- a processing unit;

- a computer readable/writeable storage medium associated with the
processing unit and arranged to store routing table information including
destination addresses associated with related transmission path information
including path availability and traffic distribution weightings; and

- a packet forwarding engine capable of extracting from the storage
medium, based on a destination address read from a data packet to be
forwarded, related routing table information and capable of distributing data
packets destined for a certain destination to different transmission paths in a
way to create a traffic load distribution corresponding with the traffic
distribution weightings read from the storage medium and to route data

packets to links carrying the minimum traffic distribution weighting in case no other transmission path towards the destination is available;

the processing unit including an associated program memory capable of storing a program, which when executed by the processing unit updates and/or modifies a content of the storage medium according to route and path availability information retrieved and/or received from the network.